U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

2015-2016 School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2015-2016

☒ Public ☐ Charter ☐ Title I ☒ Magnet ☐ Private ☐ Independent ☐ Rural

Name of Principal: Mrs. Catasha Edwards

Official School Name: Westdale Heights Academic Magnet

Official School Name Mailing Address: 2000 College Dr., Baton Rouge, LA 70809

County: East Baton Rouge Parish
State School Code Number *: 017096
Telephone: 225-926-5421
Fax: 225-926-9885
Web site/URL: http://westdaleheights.com
E-mail: nedwards2@ebrschools.org

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Catasha W. Edwards
(Principal's Signature) Date: 1-11-16

Name of Superintendent: Mr. H. Warren Drake, Jr.

District Name: East Baton Rouge

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.
_____ Date: 1-11-16

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: Louisiana Department of Education

Name of Nominating Authority: Mrs. Jill Cowart

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.
_____Date:1/26/2016
(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to ed.green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

Louisiana Green Schools Application for Green Ribbon Schools

School Contact Information

School Name: Westdale Heights Academic Magnet

Street Address: 2000 College Dr.

City: Baton Rouge State: LA Zip: 70808

Website: http://westdaleheights.com

Principal Name: Catasha Edwards

Principal Email Address: nedwards2@ebrschools.org Phone Number: 225-926-5421

Lead Applicant Name (if different): Mary Legoria

Lead Applicant Email: mlegoria@ebrschools.org Phone Number: 225-931-7374

School Information

<table>
<tr>
<td rowspan="2">Level
☐ Early Learning Center
☒ Elementary (PK - 5 or 6)
☐ K - 8
☐ Middle (6 - 8 or 9)
☐ High (9 or 10 - 12)</td>
<td rowspan="2">School Type
☒ Public
☐ Private/ Independent
☐ Charter
☒ Magnet</td>
<td rowspan="2">How would you describe your school?
☒ Urban
☐ Suburban
☐ Rural</td>
<td>District Name
East Baton Rouge Parish
Is your school in one of the largest 50 districts in the nation?
☐ Yes ☒ No</td>
</tr>
<tr>
<td>Total Enrolled: 442</td>
</tr>
<tr>
<td>Does your school serve 40% or more students from disadvantaged* households?
☒Yes ☐No</td>
<td colspan="2">% receiving FRPL 43%
% limited English proficient 25%
Other measures</td>
<td>Graduation rate:N.A.
Attendance rate: 98%</td>
</tr>
</table>

Part II: Summary Narrative:

Westdale Heights Academic Magnet (WHAM) is located in the East Baton Rouge Parish School System (EBRPSS) which is the second largest public school system in Louisiana. It is a dedicated academic magnet school that attracts students through a lottery system from all over the parish focusing on environmental science, math, and technology. This urban elementary school contains 450 students in grades Pre-K to 5. Our parish is 96% eligible for free/reduced lunch, so two years ago the school board started a program to provide free breakfast and lunch for all students. Previously, WHAM had approximately 52% of its students qualify for free/reduced lunch and was a Title 1 school. Our students come from diverse racial and ethnic backgrounds and many are children of scientists and professors at Louisiana State University (LSU).

The school is known for its rigorous academic program, state of the art technology, award winning science and math programs, community atmosphere, and outstanding/involved parents and teachers. While the school's focus is on academics, WHAM children are also educated through programs focused on civic, social, physical, and emotional growth.

WHAM has won many honors since its inception in 2004. The school has been awarded several national awards such as the NCLB Blue Ribbon School of Excellence (2008), Intel Elementary School of Distinction in Science (2010), Magnet School of Merit (2006, 2012, & 2014), and Magnet School of Excellence (2008, 2009, 2010 & 2013) from Magnet Schools of America. Teachers have been awarded the Presidential Award for Math Teaching (2008) and the Presidential Award for Science Teaching (2014). Our science specialist was named Louisiana Science Teacher of the Year (2013) and a fourth grade Math teacher was named Magnet Teacher of the Year for Region IV (2012) as well as Louisiana Math Teacher of the Year (2008). We also have eight teachers with National Board Certification. A parent was awarded the "Golden Apple" in 2005 as the top parent volunteer awarded by Volunteers in Public Schools.

In Louisiana, WHAM has held an "A" rating from state mandated test scores since 2008 based on CCSS and given in grades 3-5 yearly. We were also awarded the Louisiana Health Award (2009) given to the most outstanding physical education and health program in the state and have won the annual parish track meets. We maintain a close relationship with LSU School of Veterinary Medicine, LSU Ag Center and their "Smart Bodies" program, LSU Coastal Roots program where we grow native tree seedlings in our garden and then transplant them in the coastal areas of our state to prevent erosion, and participated in planning/teaching in the LSU Ocean Commotion Day where students from both public and private schools visited to learn about Louisiana wildlife and rehabilitation. We are also part of two citizen science projects: the Cornell Lab Project Feeder Watch and the Monarch Watch butterfly tagging program. We have received actual reports that some of

our homegrown monarchs made it to Mexico! WHAM students generated funds for Steve Irwin's International Wildlife Warriors that buys land for wild animals around the world to live and prosper, especially tigers. Students generated over $7,000 since 2011 to support local wildlife rehabilitation. Our nationally recognized Metamorphosis Children's Garden, started in 2000, has now expanded into two additional garden areas in first grade and kindergarten. Children grow fruits/vegetables that they enjoy in the classroom and share with teachers and parents. They look forward to working in their gardens as well as observing the wildlife they generate.

Although our structure was built in 1959, we are focused on green practices whenever possible. We began recycling paper and other materials in 2007 involving five large recycling bins weekly. This is approximately four yards weekly calculating to approximately 1,296 yards since its inception. We practice conserving electricity by turning off fluorescent lights on sunny days and when leaving the classroom. Most rooms have lights that automatically turn off with no activity and computers that shut down if not done so by the teachers. We have new bathrooms with automatic hand basins. No plastic water bottles are allowed on campus. Children bring their own containers from home and refill with tap water. Materials used to clean and disinfect the school are all approved by OSHA and are kept in locked closets. Buses and car pool drivers practice "no idling" while waiting for students and are separated on campus. WHAM has reduced energy consumption by 27% and water consumption by 67% from 2010-2015. WHAM is a proud Blue Ribbon School and hopes to add the Green Ribbon because it symbolizes our effort to create educated/informed citizens of tomorrow who will value and take care of our planet.

Part III: Documentation of State Evaluation of District Nominee

Pillar I: Reduced Environmental Impact and Costs

Element IA: Energy

Despite occupying an old building (built in 1959), we strive to reduce and/or eliminate greenhouse emissions. Since 2010, we have reduced overall energy consumption by 27%. This statistic was determined by Aramark, the company that handles the physical plant for our school district. We have also recycled approximately 1,300 cubic yards of paper waste since our student-recycling program began in 2007. A comprehensive lighting upgrade was completed in 2012, which consisted of upgrading existing 34-watt T 12 bulbs to 32-watt T 8 bulbs with electronic ballasts in all classrooms. Exterior lighting was upgraded from 100-watt T-12 bulbs. A campaign was also launched to turn off lights on sunny days and when students are not in the classroom. Signs cover all light switches as a reminder to students and teachers. Lights will also turn off

automatically if no activity is detected for 15 minutes. Classroom computers/printers are equipped to power down when not in use with an online power saver system. Classroom thermostats for air conditioning and heat have a controlled range of four degrees. In the cafeteria, the hood ventilation system is checked and cleaned two times yearly to insure it is working properly along with all other appliances. Air condition filters are changed every two months to keep the air clean, especially for students with asthma and to maintain efficient operation of the air conditioning system. This documented in a log kept by our principal.

Element IB: Water and Grounds

WHAM has reduced overall water consumption by 67% from 2010 to 2015 according to Aramark statistics. Rain barrels catch water that is used in our garden areas. Careful consideration is given to native plant species that are sustainable in our climate for the gardens. New bathrooms feature automatic washbasins. New roofs were installed that feature a pitched line and gutters that not only help with storm water runoff, but lessens leaks that created mildew and health problems, especially in our semi-tropical climate. No lead pipes are found in our school buildings. Water is obtained from the Baton Rouge municipal water system. It comes from fresh water aquifers and is rated among the best in the country. According to the US Geological Survey, "It is totally unnecessary to filter water in Baton Rouge for drinking. It is constantly monitored to insure continued quality.

Much of our campus is ecologically beneficial with large natural areas of grass, trees, a dry creek, playgrounds, a pond, and multiple children's gardens. All ornamentals, fruits, and vegetables in the gardens are organically grown and monitored with the help of a professional organic farmer from our community. He also conducts lessons for the children on the benefits of growing and eating organic foods. The main garden is a certified National Wildlife Federation (NWF) Habitat for Wildlife and a certified (NWF) Habitat for Birds that provides food, water, and shelter for these animals. The dry creek bed along with a wetland area controls the storm water runoff. Our climate has an annual rainfall exceeding 60 inches that makes it possible for us to use sustainable garden practices. We choose native plants that can take large amounts of rain and high temperatures with little additional care. This greatly reduces the need for watering and irrigation. We have a pond with a biological filtration system and a planted bog area that reduces the chances of an algae bloom and improves water quality naturally. No chemicals are used in the garden or pond. This protects the birds, insects, and other wildlife that frequent our campus.

Element IC: Waste

At WHAM, approximately 70% of the solid waste generated by our classrooms and cafeteria is diverted from the landfill. Total solid waste is approximately 53 cubic yards a month. Recycling materials are collected from the classrooms (primarily paper) by our student "Geaux Green" Recycling Team and a large recycling

dumpster (4 cubic yards) and a large dumpster (4 cubic yards) for only cardboard only. This creates approximately 32 cubic yards a month. Our "Geaux Green Recycle Team was initiated by four environmentally conscious students. Two fourth grade girls raised money to pay for our recycling material pickup conducting a "Save Our Earth" free dress day where students donated $2 to wear a blue shirt to represent our concern for our Earth. They planned and conducted a Recycling Kicking-Off to educate other students about the things that can and cannot be recycled. Two fifth grade students noticed that a lot of fruit was being discarded in the cafeteria. They taught other students what could be composted and bought two 50-gallon recycling bins and eight compost bins with funds generated from another free dress day. A team of students collects this fruit and vegetable waste from our cafeteria that they feed our science lab pets and compost for our gardens. They maintain their containers where children deposit peelings and unwanted organic waste. This is then taken to the compost bins. This process diverts approximately 5 cubic yards of garbage away from the landfill monthly, leaving only 16 cubic yards of solid waste that is taken to a landfill. A school sponsored Girl Scout troop collects and recycles plastic bags into plastic yarn that they crochet into sleeping mats for the homeless population in our community.

A. Monthly garbage dumpster volume in cubic yards (dumpster volume X number of collections per month)
(4 cubic yards X 4 collections = **16 cubic yards of garbage/month**)

B. Monthly recycling dumpster volume in cubic yards (recycling dumpster volume X number of collections per month)
(4 cubic yards X 4 collections = 16 cubic yards X 2 recycling dumpsters = **32 cubic yards of recycled solid waste**)

C. Monthly compostable materials volume in cubic yards (food scraps dumpster volume X number of collections per month)
(0.25 cubic yards X 20 collections = **5 cubic yards**)
TOTAL monthly (combined) solid waste = **53 cubic yards**
TOTAL monthly solid waste sent to the landfill = **16 cubic yards**
TOTAL monthly recycled or composted, diverted, solid waste = **37 cubic yards**

EBPSS strives to provide eco-friendly materials as much as possible. Office paper is Sustainable Forestry Initiative Certified with 10% certified forestry content and 90% sourcing. The instructional program relies on technology and other educational practices that include limited use of paper ditto sheets. This policy is monitored by the principal and is embraced by the faculty. Hand towels and toilet paper meet Green Seal Standard GS-1 based on chlorine-free pressing, energy and water efficiency, and content of 100% recovered material with a minimum of 25% post-consumer material. These standards are also evident in the art supplies used in the school. All cleaning products used in the schools are OSHA regulated and approved. All hazardous materials are properly identified and labeled before entering school grounds. Materials are kept locked in closets when not in use by the custodial crew. Primary cleaning takes place after school hours when children are not on

campus. The custodian goes through regular monthly training on the use and care of these products along with what personal protective equipment should be worn when working with chemicals. No bleach or chlorine products are allowed on campus. Unusable fluorescent light bulbs are packaged and removed by the school system cleaning company. The principal and supervisor of custodial services keep Material Safety Data Sheets of products used in the school. Any chemicals used to control insects (termites and fire ants only) and rodents (no poisons may be used, only mechanical and glue traps) are applied professionally and when children are off campus. A professional exterminating company treats the school two times a year during the summer and winter breaks and when needed. Wall to wall carpeting has been removed from all classrooms and replaced with tile to promote cleanliness and reduce allergy and asthma causing agents.

During the school year, a chemist from Exxon-Mobil who provides chemicals and teaches our science specialist and students safe practices in the science lab mentors certain chemical experiments. He helps conduct chemical reactions and safely removes all chemicals afterwards. Lab safety is taught the first week of school every year through role-play. Students are taught the proper way to wear safety glasses when they are working with chemicals or any materials that could potentially damage their eyes. Our Science Lab Motto is *"Safety First, Learning Second, and Fun Third"*. This motto helps curb students' silliness or carelessness that lead to accidents. Also, treated timbers were removed from our gardens and replaced with eco-friendly timbers made from recycled plastic and natural fibers to avoid the possibility of hazardous chemical leaching into our soil.

Element ID: Alternative Transportation

WHAM has an enrollment of about 450 students from across the school district. Most of the students do not live in the surrounding neighborhood, but the recent addition of a school crossing guard has encouraged ten students (2%) to walk or ride their bikes to school. Approximately 150 students (33%) ride a school bus and 290 (65%) ride to school in a personal car. Between carpool and after school care, we have about 243 cars that pick up students daily and at least 94 of the students ride in a car with two or more students. Bus riding and car pooling is stressed, but the distances and home locations of our students make this very difficult. A special "car pooling" center is set up at our Open House before school opens in August. Names of parents interested in carpooling are available and shared to encourage parents to make connections for school transportation and decrease the number of cars that visit daily. Carpooling has been a problem for the surrounding community and us. To help with this problem we have introduced a technology program to quickly notify students of their parent's arrival and assigned extra teachers for duty to make the carpool process safer and more efficient. Five years ago, new and longer carpool lanes and a separate bus area away from classrooms (over 30 feet) were

constructed to make dismissal quicker, safer, and help eliminate dangerous emission gases. Our principal is also in contact with the transportation department to add bus routes when a sufficient number of students (25) are located in a similar area. This is a problem constantly in our focus for innovative solutions that primarily improve safety for students and parents and reduce emission gases. In the carpool and bus lanes, “no idling” is practiced for cars sitting for more than ten minutes. Notices are sent out to parents encouraging idling to save money, reduce greenhouse gas emissions, and to insure the well being of our students, especially those suffering from asthma. Parents and children were also educated on the hazards of emission gases and the benefits of no idling at our STEM night held annually in the fall. “No Idling” signs are prominently displayed along the carpool lanes. Trees were planted and benches placed along side of the carpool lanes to provide cool areas for parents to wait while cars are shut off. Many parents sit in our office or our garden while they wait for carpool to begin. EBRPSS has bus polices that follow guidelines developed to lower harmful emissions and especially those children and adults. Bus drivers are instructed in these policies before the beginning of school along with copies that are given to every driver. This policy requires that engines must be turned off as soon as they arrive at the loading and unloading area of the school. They are not to be restarted until the bus is ready to depart. EBRPSS is constantly replacing old buses and is looking into propane buses for the future.

Pillar II: Improve the health and wellness of students and staff

Element IIA: Environmental Health

The East Baton Rouge Parish (EBR) School Board recognizes that the exposure of school children to pesticides poses known and unknown risks to their health and well being. Therefore, the EBR School Board has prepared, in accordance with state and federal regulations, a pest management plan that applies integrated pest management strategies of pest prevention methods and strongly recommends the least toxic methods of control for grass and weed control, and rodent and general pest control in, on or around school structures and grounds. The only hazardous pesticide used on campus is for fire ant control and it is only administered when children are not present. Records of inspections, identification, monitoring, evaluations, and pesticide applications are maintained in a log (titled, *Material Safety Data Sheets*) by our school and submitted with the pesticide management plan annually.

At WHAM, our students' health and wellness comes first. We utilize organic and sustainable farming practices in all of our gardens, using only safe natural pest control methods (e.g., neem oil, diatomaceous earth) when absolutely necessary. We grow mostly native plants that are suited for our planting zone (zone 9) that require very little human watering or chemicals to grow. Our garden pond, which was a koi pond with a swimming pool filtration system and employed the use of lights and chemicals to control the water quality, has

been recently converted to a natural pond with both bog and biological filtration systems. Now, plants and beneficial bacteria are used to control the water quality of our pond and save energy.

WHAM has a school nurse who comes twice a week and an assistant who also comes twice a week on alternate days. The school nurse is also available at all times on email and pager access for emergencies. She monitors the children with asthma and administers a "School Asthma Management Program" that was developed by EBRPSS, a local children's hospital, and community to provide asthma care that takes into account the student/parent/families and their communities. She helps to develop an individual plan for every child with asthma to help them control their condition at school. In an effort to provide a healthier environment for our students, particularly our students with asthma, we have launched a "No Idle" policy for any car parked over ten minutes. The nurse also keeps a log of students who require medication at school and helps develop emergency health plans related to other issues such as diabetes or allergies that might be life threatening. She distributes a list of children with allergies and other health problems to individual teachers to make them aware of individual health issues. She provides teachers with strategies related to supporting the students and ensuring safety and well being. For example, speakers have presented a program on epilepsy care for the faculty on staff development day in March 2016. She also presents professional development on the use of epi-pens and hand washing along at staff and faculty meetings. She administers flu vaccinations and conducts visions/hearing screenings. She also inspects the student bathrooms for cleanliness and adequate materials. Our PE specialist's partnership with *The Lady of the Lake Physicians Group* brings physicians to our staff development and Wellness Nights. Through this partnership, our teachers learn about handling situations like class parties when students who have severe allergies and other life threatening illnesses are in their classes.

Shade trees have been planted and benches have been added along our carpool lines that provide parents opportunities to experience a cool natural setting as an alternative to sitting in a running car while waiting for dismissal. This is part of our "no idling" initiative. New pitched roofs and gutters were added in 2009, which have greatly improved drainage in the classrooms and reduced the threat of mildew.

Element IIB: Nutrition and Fitness

WHAM teachers and administrators realize that urban sprawl in our city is preventing our students from having the outdoor experiences and time that we had as children. Consequently, they lack the content knowledge and sensitivity to nature that these experiences bring as well as the health benefits (e.g., physical fitness, Vitamin D absorption). Research indicates that spending time in natural settings has a calming effect on children experiencing Attention Deficient Disorder (ADD). In an effort to provide natural experiences for our students and staff, we have surrounded our students with gardens and natural settings, giving them outdoor time

during transitions from ancillary classes (e.g., library, music room, gym, science lab) and the cafeteria. The school is divided into separate class wings that feature whole wall glass windows facing to the outdoors/gardens with a bird feeder station and connected with covered walkways. Students and faculty observe, work, write, and learn in the garden settings daily. A large play structure with benches and picnic tables is located in a shady tree grove. We call this WHAMOLAMA (Westdale Heights Academic Magnet Outdoor Learning and Meeting Area). The surrounding community also uses it during school hours, weekends, and holidays. The campus has over 15 acres of grass and trees and shares a boundary with a municipal golf course along the back of the school that extends our green space farther. Students experience 90 minutes a week of organized active play (e.g., soccer, football) many times outside in their physical education (PE) classes and a minimum of 150 minutes a week of outdoor recess.

WHAM won the Louisiana Healthy Schools Award (2007-2008) for its outstanding physical education and health program and we remain the only school in East Baton Rouge Parish School System to hold this award. Beyond their PE classes, students are given numerous opportunities to become physically fit in the following programs: LA Marathon Challenge, Girls on the Run, the President's Fitness Challenge, Jump Rope for Heart, school-wide walks in the fight against Breast Cancer, Diabetes, and Cystic Fibrosis, and the EBR, LA, and LA Elementary Schools Fitness Meets. WHAM physical fitness teams have won first place in the District fitness meet in 2006, 2009, and 2010 and second place in 2007 and 2011. Our physical education specialist is also the coach for the district team that competes at the state level. The EBRPSS elementary team, which includes many WHAM students, has won eleven first place and four-second place state titles. “Go Noodle” movement videos provide active classroom brain-breaks for our students throughout the day. In this program classes choose a virtual mascot who leads them through a short session (1-20 minutes) of active play/exercise. Their mascot grows up as the class advances to higher levels of physical activity. These desk-side movement activities are healthy for the body, engaging for the attention, and beneficial to the brain.

Our Metamorphosis School garden, pond, and other gardens facilitate outdoor experiences and provide a beautiful, calm setting for outdoor classes. A circle of benches in the middle of our Metamorphosis Garden form our outdoor classroom. Here, teachers use the sights and sounds of nature to conduct science, poetry, writing, photography, math, and social studies lessons. Through a partnership with an organic farmer, our students and science specialist have learned the benefits and techniques for organic and sustainable gardening. Students eat fruits and vegetables, learning from this experience where their food comes from and how much better fruits and vegetables taste when they are picked and eaten straight from the plant. Our goal is to open our students’ eyes and minds to trying new, unusual, fresher, and healthier fruits and vegetables. Students cook and

eat their vegetables (e.g. homemade salsa, green beans with new potatoes) and taste green juices made from fruit and the fresh kale that they just harvested while we discuss the nutritional benefits of eating from the *"garden to the table."* We use visualizations like "*My Plate"* to teach our students to eat the correct proportions of food. Many parents have commented that their children insist on planting a garden at their home after working and eating from our school garden.

Since First Lady Michelle Obama promoted healthier eating in schools through the "My Plate" initiative, our cafeteria has been offering our students healthier choices (e.g., whole grain biscuits, waffles, and rolls). They also offer a healthy meal for our after school students instead of a sugary snack and drink.

Element IIB (cont.): Coordinated School Health, Mental Health, School Climate, and Safety

Through our partnership with the LSU Ag Center and our excellent physical education program, our students are provided with an exemplary health, nutrition, and wellness education. These three fitness components are taught not as separate units, but rather they are taught conjunctly as a lifestyle and are incorporated into students' everyday physical education curriculum. Along with health, nutrition, and wellness education our physical fitness program focuses on core strength, cardio fitness, muscle strength, gross-motor skills, good sportsmanship, and team building. Our PE specialist is also the lead coach for our school, school system, and state fitness meets with many past WHAM students holding records for these meets. Also, one of our teachers conducts adult fitness classes after school where parents and faculty get a chance to get their heart rate up and burn off calories in a fast pace Zoomba-style workout. Parents and staff/faculty have joined WHAM students in the LA Kids' Marathon. This marathon is run over a course of three weeks; each week students run 2 – 4 miles. By the date of the marathon, our students have logged 25 miles and complete the last mile in a race setting with other children in our city.

Agents from the LSU Ag Center conduct monthly grade specific sessions on general wellness, fitness, and nutrition education. As a result, our students can read and interpret nutrition labels on the foods they eat and apply this life skill to making healthy eating choices and assist their parents and grandparents in choosing the healthiest food in the grocery store. Our PE specialist hosts a "Wellness Warrior Night" annually to educate our students and their parents about different areas of wellness. She plans and coordinates with community health-care professionals (e.g., medical doctors, nutritionists, physical therapists) to ensure that our parents, students, faculty receive the latest information on sound health and wellness practices.

Students learn about their organ systems and how different foods affect their systems positively or negatively through the science-based, evidence-based, and child-friendly "OrganWise Core Curriculum". "OrganWise Guys" puppets, "Organ Annie" and "Organ Andy", facilitate fun, entertaining, hands-on human

physiology instruction. “Organ Annie” and “Organ Andy” both open up to reveal their plush organs (e.g., Hardy Heart, Windy Lungs, Calci M. Bone) and are accompanied by informative videos. The Ag Center agents and our PE specialist team-teach lessons (e.g., Smart from the Inside Out) using these puppets, videos, games, and pre- and post assessment tools. The culminating event for these lessons is the “Body Walk” where students walk through a model of their body. At each “Organ Tent” parents or our fifth grade students teach about the function of each organ.

WHAM has a full-time guidance counselor who contributes greatly to the mental health of our students and our school climate. The school guidance counselor supports social, emotional, and academic success. She conducts small group and individual counseling sessions as needed. Classroom guidance lessons are held weekly with fourth grade students to help alleviate the stress related to standardized testing. Topics for these lessons include: anti-bullying, emotional health and techniques to reduce stress and anxiety. School-wide anti-bullying programs are implemented with fidelity across all grade levels under her leadership. The Peace Builders strategies are utilized in providing students with positive alternatives to bullying and conflict resolution. She supports the overall mental health of the students through the implementation of the Second Steps Curriculum.

The school counselor supports the overall climate and safety of the school. Her “Positive Behavior in School” (PBIS) committee has posted rules and expectations for behavior throughout the campus. As chairmen of the safety and crisis team she helps to ensure that procedures for the protection of students are practiced through monthly drills. She annually has the local school security, fire department, and police department assess and offer suggestions related to the safety of the school facility to certify that teachers and students are knowledgeable of safe practices. As a result of her efforts, WHAM has a positive school climate and is continuously complimented by all stakeholders about our continued efforts.

Pillar III: Effective Environmental and Sustainability Education

Pillar IIIA: Interdisciplinary Learning

Interdisciplinary, place-based and project-based learning happens everyday in our classrooms, in our various gardens, and through our STEM partnerships within our community. For example, our fifth grade students use stream tables to investigate key relationships between the dynamic environment, energy, and human systems. Through these investigations they develop an understanding of the nature and practices of science and engineering, realizing that scientists, through intensive studies can recognize patterns in these processes, and how scientists use these patterns to make predictions of natural phenomena. Similarly, they also understand how scientists and engineers use models to isolate small parts of systems and demonstrate these

dynamic processes and make more reliable predictions and explanations. We begin this investigation with a demonstration on how to set up the stream table and how water carves out the land to form river systems and deposits the sediment at the mouth of the river forming a delta. We incorporate place-based education by discussing how similar the river system in our model is to aerial pictures of the Mississippi River system.

Next, students set up their own models and created a river with the regular flow of water and draw their observations. We discuss how the clay and humus deposit to form a delta and how this same process formed our state. This investigation provides evidence for them of how the surface of the Earth changes through eroding forces such as water. After observing their models they are able to visualize these fundamental concepts: "*The Earth is dynamic, constantly changing through natural and manmade interactions"* and *"Wind and water physically change Earth's surface by carving and eroding land surfaces and carrying and depositing soil, sand, and other debris"*.

Students draw their observations from the model and we discuss how scientists use models to study and find solutions to real world problems such as flooding and wetland loss. Then, in a whole class setting we review how the floodwaters top the riverbanks. They brainstorm how to control the water. We discuss how flood control structures (e.g., levees, divergent canals) are expensive to construct and that engineers have constraints like a budget. We discuss how these man-made structures allow people to live and farm in areas that were once a flood plain. However, by not allowing the floodwaters to deposit sediment over these areas, these structures have negatively impacted our wetlands by not allowing them to build up every year. This is why Louisiana is losing its valuable wetlands.

After observing numerous tests of the water flow and revisiting their observation drawings, they look for the patterns or paths carved by the flowing water and hypothesize where floodwaters might top the riverbanks. They design a plan for a waterfront city with flood control within their set budget. Then, they built their water front cities and flood control structures and flood their river. Students draw observations and record evidence of the effectiveness or ineffectiveness of the structures in their flood control systems. Peer review sessions give students opportunities to learn from other students' designs. Students then improve their designs and retest it. Our investigation is followed up by a fieldtrip to the Louisiana State University (LSU) environmental engineers' Mississippi River model. Seeing how these scientists use similar models (but on a much grander scale) provides a connection to green career pathways and real-world problems in Louisiana.

Our recycling unit is another example of interdisciplinary learning, integrating science, math, social studies, art, economics, and reading. When we study recycling in fourth grade, students first learn environmental vocabulary (e.g., post-consumer materials) and how to "pre-cycle" by reading the environmental

messages on the labels of household products or packaged foods during a "Bingo Lingo" Game. Students learn that we should not only read about the nutritional values of the foods we're buying, but that we should also read the recycling information on the packages and make environmentally friendly choices. For example, buying eggs in a postconsumer paperboard carton is a more environmentally friendly choice than buying eggs in a Styrofoam carton. First, the postconsumer carton is made from recycled paper, this saves energy and pulpwood, can be recycled again, and buying it encourages companies to use recycled cartons. On the other hand, the Styrofoam carton is plastic, made from a fossil fuel, and is not recyclable in our state. For these reasons, buying eggs in the paperboard carton is an example of "pre-cycling" and developing civic and thinking skills. Students then create a Garbage Pizza. Garbage Pizza is a pie graph of the contents of most landfills. Students use glue that has been dyed red as pizza sauce and examples of solid waste that are found in landfills as the toppings. Students learn that half of the contents of landfills are paper and they conclude that being a good citizen also includes recycling. If citizen in our community recycled paper there would be less solid waste in our landfills.

WHAM students are "Green Thinkers" and "Earth Stewards". They are concerned about every living creature and appreciate the beauty of the natural world. When they see a problem, they find a solution, and implement it. Our "*Geaux Green Team"* classroom recycling and composting programs are examples of how our students apply their civic skills and knowledge and are engaged in their school community. Our students also demonstrate that they are environmentally literate by continually scoring higher on the *Science and the Environment Content Standard* than the other science content standards on state-mandated tests as shown in the table below. We have no doubt that our students will grow up to be environmentally conscious and engaged members of their communities and informed voters.

WHAM Louisiana Education Assessment Program (LEAP) Science Scores
Average Percent Correct by Reporting Content Standard

	2012-2013	2013-2014	2014-2015
Science as Inquiry	83	82	82
Physical Science	84	81	77
Life Science	85	81	83
Earth and Space Science	80	79	81
Science and the Environment	**87**	**85**	**85**

Element IIIB: STEM Content, Knowledge, and Skills

At WHAM, we feel that we play a vital role in preparing our students to be engaged citizens by helping them gain the confidence, knowledge, and skills they will need to develop sustainable solutions for problems facing our community. Recycling is a way of life at WHAM. It is taught, explained, modeled, mentored, and

practiced. “Geaux Green” signs with big animal faces staring down at us are a constant reminder of why we must recycle. In our science lab, students learn that oil is a fossil fuel and the main ingredient in most plastics. They sort trash and learn to read human hazard warnings on cleansers and vocabulary such as “post-consumer material” and “pre-cycle”. Our students are confident problem solvers who see a problem and have the knowledge, confidence, and civic skills to find a viable solution. Applying this knowledge and these skills like the four students that initiated *“Geaux Green Team”* is true evidence learning.

Through their involvement with our various school gardens and their participation in citizen science projects, our students incorporate STEM and civic skills while learning about different career pathways involving environmental sustainability. Our school gardens are certified as a Monarch Watch Waystation, National Wildlife Federation (NWF) Wildlife Habitat, and NWF Bird Habitat. Beginning in kindergarten our students integrate math, economics, science, social studies, reading, writing, research, and drawing skills in meaningful real-world experiences through various community partnerships and citizen science projects.

Our kindergarten students collect data for scientists in the Monarch Watch Program. They collect monarch caterpillars from the milkweed in our school gardens. They raise the caterpillars in their classrooms until they complete their metamorphosis. Then, these students determine their gender, tag and release them, and record data that they will submit on the Monarch Watch website.

Our fourth grade students participate in the Cornell Lab Project FeederWatch by collecting data on the number of different species of birds that come to their feeding station. Through this project they maintain the school garden bird feeding station (outside their classroom windows) and class website and learn about different native and migrating species of birds through identifying species with field guides (books and websites), drawing and research projects. An avid community bird watcher and their fourth grade science teacher mentor these students. Many teachers have noticed that the students’ intense interest in birds has sparked a wider interest in science.

We have several community partners whose role is to connect student learning to the real world and open our students’ eyes to careers in green pathways. Through these connections our students develop and apply civic knowledge and skills (e.g., sustainable garden practices, environmental stewardship). Our partnerships are driven by the needs of our students. When they wanted to learn chemistry, we searched for a chemist and developed a partnership with Exxon-Mobil. Our students’ interest in veterinary medicine is driving the development of a new partnership with the LSU School of Veterinary Medicine (SVM). This year our students will tour the LSU SVM to learn about career options in veterinary medicine as well as attend the LSU SVM Open House.

Through our partnership with the LSU Coastal Roots Program, our students develop an attitude of stewardship toward Louisiana natural resources. Students' involvement includes growing native trees and the habitat restoration of an abandoned gravel mine. At this area, now a community park, we plant our native tree seedlings to provide shelter and food for the wildlife. Through the last eight years our students have planted approximately 2,700 native tree seedlings at three restoration sites and planted the seeds of stewardship in their hearts.

Our partnership with Wild Babies Care Sanctuary (wildlife rehabilitation center) has been our most valuable partnership. Through this partnership, our students have become avid wildlife conservationists and educators. Our students' desire to care for wildlife drove the development of this partnership. They continually bring orphaned birds and squirrels into our science lab. When this became too big of a job for our science specialist, she found our community wildlife rehabilitator, Ms. Debbie, to help. Ms. Debbie cares for injured and orphaned wildlife until they are old and well enough to be reintroduced into their wild habitat. She also shares her animals with every class at our school during our WHAM Wildlife Warrior Week. Through these experiences our students have seen beavers, opossums, skunks, armadillos, squirrels, raccoons, and turtles. She teaches them to be keen observers of the adaptations and physical features of each animal. For example, she had our students compare and contrast armadillos and turtles as four baby armadillos and a box turtle walk between them. They felt the cool body of the exothermic turtle and the warm tummy of the endothermic armadillo. It is through first hand experiences, like these, that children learn empathy for animals and become stewards of our Earth. Under the mentorship of Ms. Debbie and our science specialist, our students teach other students about their civic responsibility to care for our natural environment and its wildlife at the LSU Ocean Commotion Event and other public venues. They teach that human actions (e.g., littering, driving) sometime cause these animals to lose their habitat, be injured, or orphaned. They also teach about the dangers for both the animal and person if they try to care for the animal. This is why it is necessary to support wildlife rehabilitation and call a wildlife rehabilitator when someone finds injured or orphaned wildlife. We have raised $7,000 (to pay for food, medicine, and veterinary services) for the Wild Babies Care Sanctuary by selling t-shirts and wildlife-themed merchandise and conducting a sleepover.

Located in a university city, our school has many parents who are scientists. These scientists provide many unique partnerships and experiences for our students. We embrace this by having these local scientists teach our students science lessons and about career opportunities in science. For example, an invertebrate scientist brings university students from his classes to teach our students about invertebrates. An evolutionary biologist takes our students on a field study to observe native pitcher plants at the Abita Creek Flatwoods

Preserve. We ordered native pitcher plants (Sarracenia flava) and now grow them in our pond's bog. This year a parent biologist's neuroscience graduate students are going to teach our fifth grade students about neuronal action. They will make electrophyisology devices that will record (and show and hear) neuronal action potential activity. The set ups involve a cockroach leg.

Through the years engineers, chemists, biologists, an astrophysicist, soil scientist and oceanographer have taught our students. These scientists are also valuable resources for knowledge, chemicals, liquid nitrogen, field trips, and science equipment.

We conduct two STEM/STEAM Nights annually. A fall STEAM Night, "*STEAMing Through 2016"*, that introduces parents and students to the concept of STEM which, when art is integrated into the STEM subjects, becomes STEAM. This night integrates science strands (e.g., astronomy, engineering) with math, technology, and art. The mission of our spring STEAM Night, *Butterfly Bonanza*, is to educate our students and parents about the incredible migration and plight of the monarch butterfly and their civic responsibility to provide milkweed for these incredible insects. All students and parents attend the mandatory informative session on the monarch butterfly and choose from other sessions that include mapping the migration of the monarch and registering as a NWF Monarch Hero. At the end of the night each family leaves with a milkweed plant to plant at their home.

This year we are trying to incorporate the engineering process in more of our lessons. Instead of our traditional Easter Parties, all grade level students will participate in an "*Egg-cellent Engineering"* Challenge where they will help the Easter Bunny design a better helmet for his sons that are playing football using an egg for a model of a head. We are also integrating PE and health by teaching about how football players get concussions from high impact collisions during games. Groups of students will design and build a "better football helmet", put an egg in it, and have it dropped to simulate a high impact collision. They will then have a day to improve their design and have it redropped.

		
Project FeederWatch	*LSU Coastal Roots Partner Tree Planting*	*Making Salsa with our Tomatoes*
		
Pond Renovations	*Wellness Night* *YMCA Partners in Health Ed.*	*STEAM Night* *LSU Engineering Partners*
		
Body Walk	*Louisiana Kids' Marathon*	*LSU Scientist Partners* *Soil Scientist*

		
Geaux Green Recycle Team Classroom Recycling	*Geaux Green Recycle Team Classroom Recycling*	*Geaux Green Recycle Team Composting*
		
Raising Monarch Butterflies	*Mississippi River Flooding Models*	*Organic Farming Partner*